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October 30, 2019

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10-30-19

288152

VIA ELECTRONIC FILING

The Honorable Jocelyn G. Boyd
Chief Clerk/Administrator
Public Service Commission of South Carolina
101 Executive Center Drive, Suite 100
Columbia, South Carolina 29210

**Re: Duke Energy Progress, LLC—Monthly Power Plant Performance Report
Docket No. 2006-224-E**

Dear Ms. Boyd:

Pursuant to the Commission's Orders in Docket No. 1977-354-E, enclosed for filing is the Monthly Power Plant Performance Report in Docket No. 2006-224-E for the month of September 2019.

Thank you for your attention to this matter.

Sincerely,

Rebecca J. Dulin

Enclosure

cc: Ms. Dawn Hipp, Office of Regulatory Staff
Mr. Jeffrey M. Nelson, Office of Regulatory Staff
Ms. Nanette Edwards, Office of Regulatory Staff
Mr. Ryder Thompson, Office of Regulatory Staff
Mr. Michael Seaman-Huynh, Office of Regulatory Staff
Ms. Heather Shirley Smith, Duke Energy
Mr. Scott Elliott, Elliott & Elliott, P.A.
Mr. Garrett Stone, Brickfield, Burchette, Ritts & Stone, PC
Mr. Gary Walsh, Walsh Consulting, LLC

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**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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Period: September, 2019

Station	Unit	Date of Outage	Duration of Outage	Scheduled / Unscheduled	Cause of Outage	Reason Outage Occurred	Remedial Action Taken
Brunswick	1	09/05/2019 - 09/09/2019	91.03	Unscheduled	Reactor Shutdown for Hurricane Dorian.	Reactor shutdown for Hurricane Dorian	Following exit of emergency plan and validated access/egress paths for station personnel, gained concurrence with NRC and FEMA for restart
	2	09/05/2019 - 09/07/2019	55.95	Unscheduled	Reactor Shutdown for Hurricane Dorian.	Reactor shutdown for Hurricane Dorian	Following exit of emergency plan and validated access/egress paths for station personnel, gained concurrence with NRC and FEMA for restart
Harris	1	None					
Robinson	2	08/11/2019 - 09/03/2019	56.23	Unscheduled	Forced outage due to exciter malfunction	A failure investigation process is underway and has narrowed the cause to either failed armature windings or core delaminations.	The unit was tripped and the damaged exciter is being replaced. The failure investigation process was initiated.

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
September 2019**

Lee Energy Complex

No Outages at Baseload Units During the Month.

Mayo Station

No Outages at Baseload Units During the Month.

Richmond County Station

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
7	9/3/2019 11:30:00 AM To 9/3/2019 12:20:00 PM	Unsch	5299	Other Gas Turbine Problems	Unit tripped on High Haz Gas.	
7	9/5/2019 11:55:00 PM To 9/6/2019 12:17:00 PM	Sch	5299	Other Gas Turbine Problems	Repaired Can 10 PM3 line.	
7	9/12/2019 5:58:00 PM To 9/12/2019 6:26:00 PM	Unsch	5016	Gas Turbine Compressor - Bleed Valves	Compressor bleed valve switch failed due to corrosion.	
9	9/19/2019 11:29:00 AM To 9/19/2019 12:00:00 PM	Unsch	3410	Feedwater Pump	Primary BFP tripped, back-up failed to start due to failed 5KV breaker.	
ST5	9/19/2019 11:21:00 AM To 9/21/2019 2:03:00 PM	Unsch	4293	Turbine Hydraulic System Pipes And Valves	EHC line leak to Main Steam Control Valve 1.	
ST5	9/21/2019 5:34:00 PM To 9/21/2019 7:41:00 PM	Unsch	4299	Turbine - Other Hydraulic System Problems	Vibration on Main Control Valve EHC piping.	

Roxboro Station

No Outages at Baseload Units During the Month.

Sutton Energy Complex

Unit	Duration of Outage	Type of Outage	Cause of Outage		Reason Outage Occurred	Remedial Action Taken
ST1	9/1/2019 11:40:00 AM To 9/7/2019 2:02:00 AM	Sch	9035	Hurricane	Precautionary outage to prevent steam turbine damage in the case of a power outage.	

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**September 2019
Brunswick Nuclear Station**

	<u>Unit 1</u>		<u>Unit 2</u>	
(A) MDC (mW)	938		932	
(B) Period Hours	720		720	
(C) Net Gen (mWh) and Capacity Factor (%)	565,296	83.70	595,867	88.80
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	63	0.01	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	85,389	12.64	52,145	7.77
* (G) Net mWh Not Gen due to Partial Forced Outages	24,612	3.65	23,028	3.43
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	675,360	100.00%	671,040	100.00%
(K) Equivalent Availability (%)		99.78		99.71
(L) Output Factor (%)		95.82		96.28
(M) Heat Rate (BTU/NkWh)		10,616		10,749

* Estimate

FOOTNOTE: D and F Include Ramping Losses

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**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**September 2019
Harris Nuclear Station**

	<u>Unit 1</u>	
(A) MDC (mW)	964	
(B) Period Hours	720	
(C) Net Gen (mWh) and Capacity Factor (%)	687,739	99.09
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	8,342	1.20
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-2,001	-0.29
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	694,080	100.00%
(K) Equivalent Availability (%)		98.80
(L) Output Factor (%)		99.09
(M) Heat Rate (BTU/NkWh)		10,389

* Estimate
FOOTNOTE: D and F Include Ramping Losses

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**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**September 2019
Robinson Nuclear Station**

	<u>Unit 2</u>	
(A) MDC (mW)	741	
(B) Period Hours	720	
(C) Net Gen (mWh) and Capacity Factor (%)	494,085	92.61
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	0	0.00
(F) Net mWh Not Gen due to Full Forced Outages	41,669	7.81
* (G) Net mWh Not Gen due to Partial Forced Outages	-2,234	-0.42
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	533,520	100.00%
(K) Equivalent Availability (%)		89.11
(L) Output Factor (%)		100.45
(M) Heat Rate (BTU/NkWh)		10,572

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
September 2019**

Lee Energy Complex

	Unit 1A	Unit 1B	Unit 1C	Unit ST1	Block Total
(A) MDC (mW)	225	227	228	379	1,059
(B) Period Hrs	720	720	720	720	720
(C) Net Generation (mWh)	120,055	119,764	120,768	251,787	612,374
(D) Capacity Factor (%)	74.11	73.28	73.57	92.27	80.31
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	39,600	41,040	41,760	720	123,120
(H) Scheduled Derates: percent of Period Hrs	24.44	25.11	25.44	0.26	16.15
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	2,345	2,636	1,632	20,373	26,986
(N) Economic Dispatch: percent of Period Hrs	1.45	1.61	0.99	7.47	3.54
(O) Net mWh Possible in Period	162,000	163,440	164,160	272,880	762,480
(P) Equivalent Availability (%)	75.56	74.89	74.56	99.74	83.85
(Q) Output Factor (%)	74.11	73.28	73.57	92.27	80.31
(R) Heat Rate (BTU/NkWh)	9,305	9,416	9,413	4,424	7,341

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
September 2019**

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	194	194	182	570
(B) Period Hrs	720	720	720	720
(C) Net Generation (mWh)	103,453	105,892	122,749	332,094
(D) Capacity Factor (%)	74.06	75.81	93.67	80.92
(E) Net mWh Not Generated due to Full Scheduled Outages	2,399	0	0	2,399
(F) Scheduled Outages: percent of Period Hrs	1.72	0.00	0.00	0.58
(G) Net mWh Not Generated due to Partial Scheduled Outages	28,253	29,520	9,360	67,133
(H) Scheduled Derates: percent of Period Hrs	20.23	21.13	7.14	16.36
(I) Net mWh Not Generated due to Full Forced Outages	252	0	0	252
(J) Forced Outages: percent of Period Hrs	0.18	0.00	0.00	0.06
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	6,515	6,515
(L) Forced Derates: percent of Period Hrs	0.00	0.00	4.97	1.59
(M) Net mWh Not Generated due to Economic Dispatch	5,322	4,268	0	9,590
(N) Economic Dispatch: percent of Period Hrs	3.81	3.06	0.00	2.34
(O) Net mWh Possible in Period	139,680	139,680	131,040	410,400
(P) Equivalent Availability (%)	77.87	78.87	87.89	81.41
(Q) Output Factor (%)	75.50	75.81	93.67	81.45
(R) Heat Rate (BTU/NkWh)	11,996	11,491	0	7,401

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
September 2019**

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	216	216	248	680
(B) Period Hrs	720	720	720	720
(C) Net Generation (mWh)	114,332	114,258	165,011	393,601
(D) Capacity Factor (%)	73.52	73.47	92.41	80.39
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	0	0
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(G) Net mWh Not Generated due to Partial Scheduled Outages	30,218	29,520	0	59,738
(H) Scheduled Derates: percent of Period Hrs	19.43	18.98	0.00	12.20
(I) Net mWh Not Generated due to Full Forced Outages	112	0	13,099	13,210
(J) Forced Outages: percent of Period Hrs	0.07	0.00	7.34	2.70
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	10,858	11,742	450	23,051
(N) Economic Dispatch: percent of Period Hrs	6.98	7.55	0.25	4.71
(O) Net mWh Possible in Period	155,520	155,520	178,560	489,600
(P) Equivalent Availability (%)	80.50	81.02	92.66	85.10
(Q) Output Factor (%)	79.49	78.68	99.73	86.60
(R) Heat Rate (BTU/NkWh)	11,639	11,636	0	6,759

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
September 2019**

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	224	224	271	719
(B) Period Hrs	720	720	720	720
(C) Net Generation (mWh)	113,232	114,779	121,892	349,903
(D) Capacity Factor (%)	70.21	71.17	62.47	67.59
(E) Net mWh Not Generated due to Full Scheduled Outages	0	0	36,413	36,413
(F) Scheduled Outages: percent of Period Hrs	0.00	0.00	18.66	7.03
(G) Net mWh Not Generated due to Partial Scheduled Outages	38,880	38,160	12,675	89,715
(H) Scheduled Derates: percent of Period Hrs	24.11	23.66	6.50	17.33
(I) Net mWh Not Generated due to Full Forced Outages	0	0	0	0
(J) Forced Outages: percent of Period Hrs	0.00	0.00	0.00	0.00
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	0	0
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.00	0.00
(M) Net mWh Not Generated due to Economic Dispatch	9,168	8,341	24,140	41,649
(N) Economic Dispatch: percent of Period Hrs	5.68	5.17	12.37	8.05
(O) Net mWh Possible in Period	161,280	161,280	195,120	517,680
(P) Equivalent Availability (%)	75.89	76.34	74.84	75.64
(Q) Output Factor (%)	74.87	75.63	76.80	75.78
(R) Heat Rate (BTU/NkWh)	11,687	11,687	0	7,616

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
September 2019**

Mayo Station

Unit 1

(A) MDC (mW)	746
(B) Period Hrs	720
(C) Net Generation (mWh)	303,230
(D) Net mWh Possible in Period	537,120
(E) Equivalent Availability (%)	96.68
(F) Output Factor (%)	56.45
(G) Capacity Factor (%)	56.45

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Intermediate Power Plant Performance
Review Plan
September 2019**

	Roxboro Station		
	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	720	720	720
(C) Net Generation (mWh)	135,118	327,852	375,008
(D) Net mWh Possible in Period	484,560	502,560	511,920
(E) Equivalent Availability (%)	99.26	97.24	95.80
(F) Output Factor (%)	73.25	65.24	73.26
(G) Capacity Factor (%)	27.88	65.24	73.26

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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October 2018 - September 2019

Brunswick Nuclear Station

	<u>Unit 1</u>		<u>Unit 2</u>	
(A) MDC (mW)	938		932	
(B) Period Hours	8760		8760	
(C) Net Gen (mWh) and Capacity Factor (%)	7,742,073	94.22	6,897,968	84.49
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00	716,056	8.77
* (E) Net mWh Not Gen due to Partial Scheduled Outages	34,991	0.43	87,078	1.07
(F) Net mWh Not Gen due to Full Forced Outages	513,320	6.25	276,773	3.39
* (G) Net mWh Not Gen due to Partial Forced Outages	-73,504	-0.90	186,445	2.28
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00	0	0.00
* (I) Core Conservation	0	0.00	0	0.00
(J) Net mWh Possible in Period	8,216,880	100.00%	8,164,320	100.00%
(K) Equivalent Availability (%)		93.70		85.84
(L) Output Factor (%)		100.50		96.19
(M) Heat Rate (BTU/NkWh)		10,439		10,730

* Estimate

FOOTNOTE: D and F Include Ramping Losses

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**Duke Energy Progress
 Base Load Power Plant Performance Review Plan**

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**October 2018 - September 2019
 Harris Nuclear Station**

Unit 1

(A) MDC (mW)	964	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	8,573,105	102.38
(D) Net mWh Not Gen due to Full Schedule Outages	0	0.00
* (E) Net mWh Not Gen due to Partial Scheduled Outages	9,074	0.11
(F) Net mWh Not Gen due to Full Forced Outages	0	0.00
* (G) Net mWh Not Gen due to Partial Forced Outages	-208,227	-2.49
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	8,373,952	100.00%
(K) Equivalent Availability (%)		99.89
(L) Output Factor (%)		102.37
(M) Heat Rate (BTU/NkWh)		10,257

* Estimate

FOOTNOTE: D and F Include Ramping Losses

**Duke Energy Progress
Base Load Power Plant Performance Review Plan**

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**October 2018 - September 2019
Robinson Nuclear Station**

Unit 2

(A) MDC (mW)	741	
(B) Period Hours	8760	
(C) Net Gen (mWh) and Capacity Factor (%)	5,221,032	80.43
(D) Net mWh Not Gen due to Full Schedule Outages	1,009,020	15.54
* (E) Net mWh Not Gen due to Partial Scheduled Outages	83,705	1.29
(F) Net mWh Not Gen due to Full Forced Outages	408,699	6.30
* (G) Net mWh Not Gen due to Partial Forced Outages	-231,296	-3.56
* (H) Net mWh Not Gen due to Economic Dispatch	0	0.00
* (I) Core Conservation	0	0.00
(J) Net mWh Possible in Period	6,491,160	100.00%
(K) Equivalent Availability (%)		76.74
(L) Output Factor (%)		102.91
(M) Heat Rate (BTU/NkWh)		10,313

* Estimate

FOOTNOTE: D and F Include Ramping Losses

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- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October, 2018 through September, 2019**

Richmond County Station

	Unit 7	Unit 8	Unit ST4	Block Total
(A) MDC (mW)	193	193	180	566
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,231,314	1,232,463	1,390,644	3,854,421
(D) Capacity Factor (%)	72.93	73.00	88.08	77.78
(E) Net mWh Not Generated due to Full Scheduled Outages	106,215	93,362	60,727	260,304
(F) Scheduled Outages: percent of Period Hrs	6.29	5.53	3.85	5.25
(G) Net mWh Not Generated due to Partial Scheduled Outages	194,098	199,761	87,547	481,406
(H) Scheduled Derates: percent of Period Hrs	11.50	11.83	5.54	9.71
(I) Net mWh Not Generated due to Full Forced Outages	18,725	22,175	6,133	47,034
(J) Forced Outages: percent of Period Hrs	1.11	1.31	0.39	0.95
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	18,781	18,781
(L) Forced Derates: percent of Period Hrs	0.00	0.00	1.19	0.38
(M) Net mWh Not Generated due to Economic Dispatch	138,043	140,634	15,024	293,702
(N) Economic Dispatch: percent of Period Hrs	8.18	8.33	0.95	5.93
(O) Net mWh Possible in Period	1,688,395	1,688,395	1,578,857	4,955,647
(P) Equivalent Availability (%)	81.15	81.36	89.05	83.70
(Q) Output Factor (%)	79.22	79.24	92.52	83.56
(R) Heat Rate (BTU/NkWh)	11,446	11,208	0	7,240

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October, 2018 through September, 2019**

Richmond County Station

	Unit 9	Unit 10	Unit ST5	Block Total
(A) MDC (mW)	216	216	248	680
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,234,105	1,236,692	1,627,450	4,098,247
(D) Capacity Factor (%)	65.22	65.36	74.91	68.80
(E) Net mWh Not Generated due to Full Scheduled Outages	325,051	342,004	423,113	1,090,168
(F) Scheduled Outages: percent of Period Hrs	17.18	18.07	19.48	18.30
(G) Net mWh Not Generated due to Partial Scheduled Outages	175,585	168,381	0	343,966
(H) Scheduled Derates: percent of Period Hrs	9.28	8.90	0.00	5.77
(I) Net mWh Not Generated due to Full Forced Outages	112	1,001	26,135	27,247
(J) Forced Outages: percent of Period Hrs	0.01	0.05	1.20	0.46
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	1,144	1,144
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.05	0.02
(M) Net mWh Not Generated due to Economic Dispatch	157,307	144,082	94,638	396,028
(N) Economic Dispatch: percent of Period Hrs	8.31	7.61	4.36	6.65
(O) Net mWh Possible in Period	1,892,160	1,892,160	2,172,480	5,956,800
(P) Equivalent Availability (%)	73.54	72.97	79.27	75.45
(Q) Output Factor (%)	82.63	82.82	95.57	87.39
(R) Heat Rate (BTU/NkWh)	11,394	11,318	0	6,846

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Base Load Power Plant
Performance Review Plan
October, 2018 through September, 2019**

Sutton Energy Complex

	Unit 1A	Unit 1B	Unit ST1	Block Total
(A) MDC (mW)	224	224	271	719
(B) Period Hrs	8,760	8,760	8,760	8,760
(C) Net Generation (mWh)	1,250,438	1,226,107	1,370,157	3,846,702
(D) Capacity Factor (%)	63.73	62.49	57.72	61.07
(E) Net mWh Not Generated due to Full Scheduled Outages	110,193	153,485	137,871	401,549
(F) Scheduled Outages: percent of Period Hrs	5.62	7.82	5.81	6.38
(G) Net mWh Not Generated due to Partial Scheduled Outages	254,213	237,329	30,955	522,497
(H) Scheduled Derates: percent of Period Hrs	12.96	12.09	1.30	8.30
(I) Net mWh Not Generated due to Full Forced Outages	82,014	129,013	468,320	679,346
(J) Forced Outages: percent of Period Hrs	4.18	6.57	19.73	10.79
(K) Net mWh Not Generated due to Partial Forced Outages	0	0	11,917	11,917
(L) Forced Derates: percent of Period Hrs	0.00	0.00	0.50	0.19
(M) Net mWh Not Generated due to Economic Dispatch	265,382	216,306	354,741	836,429
(N) Economic Dispatch: percent of Period Hrs	13.52	11.02	14.94	13.28
(O) Net mWh Possible in Period	1,962,240	1,962,240	2,373,960	6,298,440
(P) Equivalent Availability (%)	77.25	73.51	72.66	74.35
(Q) Output Factor (%)	77.26	77.68	77.78	77.58
(R) Heat Rate (BTU/NkWh)	11,435	11,444	0	7,365

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.
- (R) Includes Light Off BTU's

**Duke Energy Progress
Baseload Power Plant
Performance Review Plan
October, 2018 through September, 2019**

**Pre-commercial Generation
Asheville Combined Cycle**

	Unit 5	Unit 7	Block Total
(A) MDC (mW)			
(B) Period Hrs			
(C) Net Generation (mWh)	15,410	10,823	26,233
(D) Capacity Factor (%)			
(E) Net mWh Not Generated due to Full Scheduled Outages			
(F) Scheduled Outages: percent of Period Hrs			
(G) Net mWh Not Generated due to Partial Scheduled Outages			
(H) Scheduled Derates: percent of Period Hrs			
(I) Net mWh Not Generated due to Full Forced Outages			
(J) Forced Outages: percent of Period Hrs			
(K) Net mWh Not Generated due to Partial Forced Outages			
(L) Forced Derates: percent of Period Hrs			
(M) Net mWh Not Generated due to Economic Dispatch			
(N) Economic Dispatch: percent of Period Hrs			
(O) Net mWh Possible in Period			
(P) Equivalent Availability (%)			
(Q) Output Factor (%)			
(R) Heat Rate (BTU/NkWh)			

Note: The Power Plant Performance Data reports are limited to capturing data beginning the first full month a station is in commercial operation. During the months specified above, Asheville CC produced pre-commercial generation.

**Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
October, 2018 through September, 2019**

Mayo Station

Units	Unit 1
(A) MDC (mW)	746
(B) Period Hrs	8,760
(C) Net Generation (mWh)	1,519,254
(D) Net mWh Possible in Period	6,534,960
(E) Equivalent Availability (%)	73.11
(F) Output Factor (%)	46.66
(G) Capacity Factor (%)	23.25

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

**Duke Energy Progress
Intermediate Power Plant
Performance Review Plan
October, 2018 through September, 2019**

Roxboro Station

Units	Unit 2	Unit 3	Unit 4
(A) MDC (mW)	673	698	711
(B) Period Hrs	8,760	8,760	8,760
(C) Net Generation (mWh)	1,426,282	1,906,129	2,500,172
(D) Net mWh Possible in Period	5,895,480	6,114,480	6,228,360
(E) Equivalent Availability (%)	77.99	67.38	73.80
(F) Output Factor (%)	62.46	59.18	64.86
(G) Capacity Factor (%)	24.19	31.17	40.14

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Outages for 100 mW or Larger Units
September, 2019

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<u>Unit Name</u>	<u>Capacity Rating (mW)</u>	<u>Full Outage Hours</u>		<u>Total</u>
		<u>Scheduled</u>	<u>Unscheduled</u>	
Brunswick 1	938	0.00	0.00	0.00
Brunswick 2	932	0.00	0.00	0.00
Harris 1	964	0.00	0.00	0.00
Robinson 2	741	0.00	56.23	56.23

Duke Energy Progress
Outages for 100 mW or Larger Units
September 2019

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Asheville Steam 1	192	0.00	7.18	7.18
Asheville Steam 2	192	0.00	8.00	8.00
Asheville CT 3	185	315.67	0.00	315.67
Asheville CT 4	185	404.42	0.00	404.42
Darlington CT 12	133	10.28	0.00	10.28
Darlington CT 13	133	720.00	0.00	720.00
Lee Energy Complex CC 1A	225	0.00	0.00	0.00
Lee Energy Complex CC 1B	227	0.00	0.00	0.00
Lee Energy Complex CC 1C	228	0.00	0.00	0.00
Lee Energy Complex CC ST1	379	0.00	0.00	0.00
Mayo Steam 1	746	0.00	0.00	0.00
Richmond County CT 1	189	204.72	0.00	204.72
Richmond County CT 2	187	0.00	0.00	0.00
Richmond County CT 3	185	180.00	0.00	180.00
Richmond County CT 4	186	185.33	0.00	185.33
Richmond County CT 6	187	720.00	0.00	720.00
Richmond County CC 7	194	12.37	1.30	13.67
Richmond County CC 8	194	0.00	0.00	0.00
Richmond County CC ST4	182	0.00	0.00	0.00
Richmond County CC 9	216	0.00	0.52	0.52
Richmond County CC 10	216	0.00	0.00	0.00
Richmond County CC ST5	248	0.00	52.82	52.82

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.

Duke Energy Progress
Outages for 100 mW or Larger Units
September 2019

Unit Name	Capacity Rating (mW)	Full Outage Hours		Total Outage Hours
		Scheduled	Unscheduled	
Roxboro Steam 1	380	720.00	0.00	720.00
Roxboro Steam 2	673	0.00	0.00	0.00
Roxboro Steam 3	698	0.00	0.00	0.00
Roxboro Steam 4	711	0.00	0.00	0.00
Sutton Energy Complex CC 1A	224	0.00	0.00	0.00
Sutton Energy Complex CC 1B	224	0.00	0.00	0.00
Sutton Energy Complex CC ST1	271	134.37	0.00	134.37
Wayne County CT 10	192	0.00	17.83	17.83
Wayne County CT 11	192	0.00	0.00	0.00
Wayne County CT 12	193	41.00	0.00	41.00
Wayne County CT 13	191	71.00	3.67	74.67
Wayne County CT 14	195	154.00	0.00	154.00

Notes:

- Units in commercial operation for the full month are presented. Pre-commercial or partial month commercial operations are not included.